

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Petri Horppu et al.
 Serial No. : 09/380,519
 Filing or 371(c) date : 3 September 1999
 For : Mounting Apparatus
 Examiner : Mcevoy, Thomas
 Group Art Unit : 3731

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Commissioner of Patents
Alexandria, VA 22313-1450

BRIEF FOR APPELLANT

Sir:

Applicants appeal the final rejection, mailed 17 June 2010, of claims 1, 2, 5-9, 15 and 16. Applicants filed a Request for Pre-Appeal Brief Review and Notice of Appeal on 9 December 2010. A Notice of Panel Decision from Pre-Appeal Brief Review (the "Decision") was mailed 23 March 2011. The Panel had determined that the application remains under appeal because there is at least one actual issue for appeal.

The time period for filing an Appeal Brief was reset to be one month from the mailing of the Decision, or the balance of the two-month period running from receipt of the Notice of Appeal, whichever is greater.

Applicants herewith petition the Commissioner for Patents to extend the time for filing this Appeal Brief for five (5) months from 9 February 2011 to 9 July 2011. Authorization is given to charge the extension of time fee of \$2350.00 (37 C.F.R. §1.136 and §1.17) to Deposit Account No. 23-1703. Any deficiency or overpayment should be charged or credited to the above numbered deposit account.

I. REAL PARTY IN INTEREST

The real party in interest is the assignee: AstraZeneca AB (Change of Name at Reel 022620, Frame 0730).

II. RELATED APPEALS AND INTERFERENCES

No related appeals or interferences are pending.

III. STATUS OF CLAIMS

The original application contained 21 claims, i.e., claims 1-21. Claims 1, 2, 5-9 and 15-18 are pending.

Claim 3-4, 10-14 and 19-21 were canceled. Claims 17-18 are withdrawn from consideration due to the restriction requirement of record.

Claims 1, 2, 5-9, 15 and 16 are finally rejected and involved in this appeal.

IV. STATUS OF AMENDMENTS

No amendment has been filed subsequent to the final Office Action of 17 June 2010.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed invention relates to an apparatus for mounting an elastic band onto a surgical instrument for ligating internal tissues in a cavity of the human body. The claimed mounting apparatus comprises:

- (1) a tapered adapter **14** having a plurality of circumferentially spaced-apart fingers **22** extending from the rear larger end towards the forward smaller end of the adapter (See Figs. 5-8), and
- (2) an expander device **24** movable relative to the adapter and having a circumference and a plurality of circumferentially spaced-apart arms **26** insertable between the fingers of the adaptor (See Figs. 13-15), wherein the thickness of the arms of the expander device taper in a radial direction towards the center of the circumference (See Figs 9-12).

As described in specification and as illustrated by the Figures, the expressly recited structure of the tapered adaptor and expander device permits these components to cooperate or mesh with each other in such a way as to impart certain operational advantages. The purpose of this structure is to facilitate the mating and slidable engagement of the spaced-apart arms **26** of the expander device **24** between the fingers **22** of the adaptor **14**.

Claim 1 is the only independent claim. The remaining claims, i.e., claims 2, 5-9, 15 and 16 are either directly or indirectly dependent on claim 1. The claimed subject matter of independent claim 1 mapped to the specification by page and line number is provided below:

1. A mounting apparatus for mounting an endless cord which is expandable from a contracted condition to an expanded condition onto an end of a structure having a transverse dimension greater than that of the cord when in the contracted condition **(page 2, lines 9-11; paragraph bridging pages 10-11; and Figs. 13-15)**, said apparatus comprising a tapered adaptor for the cord to be propelled over onto the end of the structure having a forward smaller end for location in the cord in its contracted condition and a rear larger end for juxtaposing with the end of the structure **(page 2, lines 13-16; paragraph bridging pages 9-10; and Figs. 5-8)**, said apparatus further comprising an expander device movable relative to the adaptor to propel the cord over the adaptor onto the rear larger end thereof **(paragraph bridging pages 10-11; and Figs. 13-15)**, wherein the adaptor comprises a plurality of circumferentially spaced-apart fingers which extend from the rear larger end towards the forward smaller end **(page 2, lines 13-16; paragraph bridging pages 9-10; and Figs. 5-8)** and the expander device has a circumference and comprises a plurality of circumferentially spaced-apart arms insertable between the fingers of the adaptor, and wherein the thickness of the arms of the expander device taper in a radial direction towards the center of the circumference **(page 2, 16-18; page 10, lines 16-23; and Figs. 9-12)**.

VI. THE GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether the final rejection of claims 1, 2, 5-9, 15 and 16 of the subject application under 35 U.S.C. §103(a) as allegedly being unpatentable over the combination of US 4,548,201 to Yoon (“Yoon”) in view of US 5,643,290 to Clark et al. (“Clark”) is proper.

VII. ARGUMENT

For the following reasons, Applicants submit that a *prima facie* case of obviousness has not been established. Therefore, the final rejection is improper.

The primary reference to Yoon is directed to a surgical ring clip for ligating a linear organ structure. With reference to Figure 1, the clip **10** has a plurality of protruding teeth or needles **18** embedded within a central lumen **14** of the clip. When released around the loop of a linear organ structure drawn through the lumen, teeth or needles **18** protrude through the loop thereby holding the bodily tissue in a ligated formation. With reference to Figure 18, Yoon discloses a ring loader **100** for stretching clip **10** and a ring dilator **130** for passing the clip onto and over the surface of the ring loader. As illustrated in Figure 18, ring loader **100** has channels **108** for passage of teeth or needles **18** as the clip is pushed onto and along the surface of the ring loader.

In the final Office Action, the Examiner likens the ring loader and ring dilator disclosed by Yoon to the tapered adaptor and expander device, respectively of the claimed invention. Specifically, in support of the rejection, the Examiner relies on the tapered adaptor **100** but not the expander device **130** shown in Figure 18. Instead, the Examiner relies on an alternative design of an expander device as shown in Figure 21A.

On page 3 of the final Office Action, the Examiner acknowledges that Yoon fails to disclose an expander device (Fig. 21A) having arms that are insertable between the fingers, i.e., channels **108**, of a tapered adaptor **100**. For this purpose, the Examiner relies on the secondary reference to Clark and states that Clark teaches that it is advantageous to insert arms of an expander device between fingers of a tapered adaptor to provide better alignment and loading of a cord. In support, the Examiner cites Clark at column 2, lines 42-44, and the Abstract. In conclusion, the Examiner alleges that it would have obvious in view of Clark to have made the

arms of the Yoon expander device (Fig. 21A) insertable between channels **108** of the tapered adaptor **100** in order to better align the tapered adaptor and expander device and to provide an even pushing force on the cord.

Applicants respectfully disagree and submit that Yoon teaches against the modification as proposed by the Examiner. Furthermore, the modification would defeat the intended purpose and function of Yoon. Even after *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007), it remains the law that the prior art cannot be modified to meet the claimed invention if the modification would render the prior art unsatisfactory for its intended purpose. In support, Applicants rely on M.P.E.P §2143.01 which provides:

M.P.E.P §2143.01 “Suggestion or Motivation To Modify the References [R-6] - 2100 Patentability”

V. THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

a. **Longitudinal channels **108** are not designed to provide keyed-alignment between the adaptor and expander device.**

On page 3 of the Office Action, the Examiner states it would have been obvious in view of Clark to have made two of the arms of the Yoon expander device (21A) insertable in the longitudinal channels **108** of the adaptor **100** in order to better align the adaptor and expander device. It remains Applicants position that channels **108** are not designed for keying alignment between the adaptor and expander as alleged by the Examiner.

Specifically, as disclosed by Yoon in column 10, ring clip **10** is made with a ring **12** of a material having sufficient elasticity. Embedded within ring **12** are clips **16** including needles **18**, serrated teeth **28**, pins **38**, etc. Figure 1 illustrates a ring clip **10** with needles **18** projecting into the lumen **14** of a ring clip **10**.

As illustrated in Figure 18, a tapered adaptor **100** has one or more longitudinal channels **108**. Yoon discloses that channels **108** are dimensioned to accept files of clip teeth **18**, **28**, **38** (See col. 11, lines 10-26; Figs. 18 A and C). Alternatively, if the clip teeth **18**, **28**, **38** are

designed to mesh or extend more than halfway across the lumen **14** of ring clip **10**, Yoon discloses that it would be preferable to use an accommodation channel **109** that completely bifurcates the elongated protrusion **104** of ring loader **100**. (See Fig. 18B). This alternative arrangement is designed to assure that the tips or teeth of ring clip **10** are not bent or dislocated during the loading operation (See col. 11, 15-26).

Thus, contrary to the Examiner's position, longitudinal channels **108** are not designed or intended by Yoon for keying alignment between the adaptor **100** and expander device (Fig. 21A). Rather, channels **108** are designed for the express purpose of protecting fragile clip teeth **18, 28, 38** from damage. Accordingly, to achieve this protective function, channels **108** should be free of any other structural element that could bend, dislocate or otherwise interfere with the passage of clip teeth **18, 28, 38** through channels **108** during the loading operation. Therefore, the Examiner's proposed modification to provide the expander device (Fig. 21A) with projections insertable in channels **108** would defeat the intended purpose and function of Yoon.

In the final Office Action, the Examiner further states that one of ordinary skill in the art would easily recognize that any projection extending from the expander device (Fig. 21A) of Yoon should be set back slightly so as not to contact the teeth or needles. However, modifying the arms of the expander device to have projections similar to clip teeth **18, 28, 38** - as suggested by the Examiner - would result in thin, fragile arms incapable of serving any guiding function. Such thin arms would easily fail upon the application of force to push the ring clip **10** onto the increasing cross-sectional surface of the ring loader **100**. Furthermore, narrowing the inner diameter of the arms of the expander device (Fig. 21A) to match channels **108** - as suggested by the Examiner - could possibly weaken the structural integrity of the expander device thus rendering it unsuitable for its purpose, i.e., resting against the base of ring clip **10** to distribute pressure over the surface of the ring clip **10**. (See col. 11, lines 32-37).

b. Ring dilator 130, 131 and Fig. 21A must be free to rotate.

Yoon discloses the following three embodiments of a ring dilator:

1. Figure 18 – ring dilator **130**;
2. Figure 20 – ring dilator **131** and
3. Figure 21A.

Ring dilators **130** and **131** are described at column 11, lines 27-58, and column 12, lines 29-36, respectively. The structure of each dilator is described as having the ability to rotate as the dilator is passed over the surface of the ring loader:

Ring dilator 130: “This articulation permits posts **132** to rotate tangentially outward from aperture **134**, thereby allowing aperture **134** to deform in order to continue to press against the base **13** of the ring clip while adapting to the increased cross-sectional diameter of conic surface **102**” (col. 11, lines 54-58). (Emphasis added).

Ring dilator 131: “Outward tangential rotation of arms **133** allows central aperture **134** to expand to adapt to increasing cross-sectional area of the conic surfaces **102**, **103** of ring loaders **100**, **101**.” (col. 12, lines 33-35). (Emphasis added)

Thus, the ability and freedom to rotate is an intended feature of the ring dilator as it passes over the surface of the ring loader.

The Examiner relies on the expander device of Figure 21A for which there is no written description other than: “FIGS. 21A and 21 B show ring dilators that are suitable for pushing a ring clip unto the intermediate cylinder B of an applicator via a ring loader **100**, **101**.”

Notwithstanding the absence of any written description, Applicants submit that the expander device of Figure 21A must share the same essential features of the ring dilators **130** and **131**. Specifically, expander devices **130** and **131** and that expander device illustrated by Figure 21A must be able to rotate freely along the surface of the adaptor **100**. Accordingly, Yoon teaches against any modification that would interfere with the ability of the expander device to rotate. To prevent such ability to rotate by keying alignment between the ring dilator and ring loader as suggested by the Examiner is an impermissible modification of the prior art to meet the claimed invention.

In summary, channels **108** are expressly designed to protect the fragile clip teeth **18**, **28**, **38** from damage. It would defeat Yoon’s intended purpose and function if the arms of the expander device (Fig. 21A) were modified to have projections insertable in channels **108**. Such projections could cause damage to or otherwise interfere with the passage of clip teeth **18**, **28**, **38** in channels **108** and would prevent the expander device from rotating freely as it pushes the ring along the expanding surface of the adaptor **100**.

For all of the foregoing reasons, Applicants submit that a *prima facie* case of obviousness has not been established. Yoon teaches against the modification as proposed by the Examiner. The structural modifications proposed the Examiner to meet the claimed invention would render Yoon unsatisfactory for its intended purpose. As such, the obviousness rejection based on the combination of Yoon and Clark is improper. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007). Withdrawal of the §103 rejection is requested.

Conclusion

Claims 1, 2, 5-9, 15 and 16 are patentable over the cited prior art for the reasons of record. Applicant requests withdrawal of the rejection and the issuance of a Notice of Allowance.

Authorization is hereby given to charge any fee due in connection with this communication to Deposit Account No. 23-1703.

Dated: 27 June 2011

Respectfully submitted,

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Attachments:

1. Claims Appendix
2. Evidence Appendix
3. Related Proceedings Appendix

APPENDIX 1

Claims Involved in the Appeal

U.S. Patent Application Serial No. 09/380,519

1. A mounting apparatus for mounting an endless cord which is expandable from a contracted condition to an expanded condition onto an end of a structure having a transverse dimension greater than that of the cord when in the contracted condition, said apparatus comprising a tapered adaptor for the cord to be propelled over onto the end of the structure having a forward smaller end for location in the cord in its contracted condition and a rear larger end for juxtaposing with the end of the structure, said apparatus further comprising an expander device movable relative to the adaptor to propel the cord over the adaptor onto the rear larger end thereof, wherein the adaptor comprises a plurality of circumferentially spaced-apart fingers which extend from the rear larger end towards the forward smaller end and the expander device has a circumference and comprises a plurality of circumferentially spaced-apart arms insertable between the fingers of the adaptor, and wherein the thickness of the arms of the expander device taper in a radial direction towards the center of the circumference.

2. The mounting apparatus as claimed in claim 1, wherein the expander device is operable in a first mode thereof to propel the cord over the adaptor on to the rear larger end thereof and in a second mode thereof to propel the cord from the rear larger end onto the end of the structure.

Claims 3-4 (Cancelled)

5. The mounting apparatus as claimed in claim 1, wherein the adaptor and the expander device are adapted to mesh with one another to propel the cord over the adaptor to the rear larger end thereof.

6. The mounting apparatus as claimed in claim 1, wherein the thickness of the circumferentially spaced-apart fingers of the adaptor taper in a radial direction towards the forward smaller end of the adaptor.

7. The mounting apparatus as claimed in claim 1, wherein the forward smaller end of the adaptor is presented by a central member.
8. The mounting apparatus as claimed in claim 7, wherein the central member and the fingers of the adaptor are connected to one another.
9. The mounting apparatus as claimed in claim 2, wherein the expander device includes a tubular section adapted to slide over the adaptor to propel the cord from the rear larger end thereof onto the end of the structure.

Claims 10 – 14 (Cancelled)

15. A surgical kit comprising a mounting apparatus as claimed in any one of claims 1, 2 or 5-9.
16. The surgical kit as claimed in claim 15, further comprising a surgical instrument for ligating internal body tissue.

Claims 17-18 (Withdrawn)

Claims 19-21 (Cancelled)

APPENDIX 2
Evidence Appendix
U.S. Patent Application Serial No. 09/380,519

NONE

APPENDIX 3
Related Proceedings Appendix
U.S. Patent Application Serial No. 09/380,519

NONE